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with Spears:57: "One may doubt whether the Yahgan canoe shows greater ingenuity than Yahgan weapons and implements for obtaining food do" /cited in English/.

them to give up their material culture! If interrogated, they justify their adherence to the old, their preservation of the things inherited from their fathers, on the grounds that they suffice perfectly for their modest needs and the necessities of their life. The form and construction of their tools represent maximum efficiency within the framework of what is available to them. With these material means they have made their lives comfortable, pleasant, and humanly dignified. The words of Despard (b):680 with regard to the merits of the bark canoe apply absolutely to all their utensils: "Yet no improvements are thought of; what served the father serves the son for a pattern, and would never be departed from for a thousand generations" /cited in English/. They have taken over infinitesimally little from Europeans -- iron, for example. The basic form of their implements has remained unchanged for many centuries.

E. Obtaining Food

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The Indian's sole and vital care is centered on the necessary food; his thought and concern day and night are on his subsistence. If he has an exceptionally abundant supply, he feels extraordinarily relieved, and free of care, he abandons himself /512/ to always desired rest. Ordinarily, however, the threat of hunger keeps him on the move day after day, forces him to abandon his hut and change his camp, goads him to a canoe trip or a journey on foot, all depending on whether the prospect of booty beckons here or there (228).

228. According to Despard (b):679, these Indians live only for the business of obtaining food: "The great want with them

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is of food, naturally; and their habits are formed with a view to supply it, and all their implements are to serve in procuring it...Hence are they constantly roaming" /cited in English/.

Food gathering in the widest sense of the term is, after all, the sole and true occupation of our natives. If this exertion were not always obligatory and without exception unavoidable for everyone, there would be great danger that their physical and spiritual well-being would languish. Their work never leads to weakness or to a lessening of their ability. Quite the contrary, despite weariness and exhaustion, despite strain and extreme exertion which are sometimes recurrent, the man's hunting and the woman's collecting are so attractive and stimulating, so satisfying and filled with success for the victor, that these things alone make every adult uncomplainingly accept the unavoidable hardships of making a living, and this decreases the pressure of their cares about their daily food. This strain is further reduced by the unfailing prospect of their always finding, here or there and relatively easily, what is absolutely necessary.

462 Both sexes contribute their share to the support of the family, which consists of father, mother, and children. Not everyone contributes to the same extent, however, but in the manner appropriate to his sex. The woman more than the man is tied down by unavoidable duties in her hut where she must take care of the welfare of her children. What the man accomplishes in one field, she does in another; both partners are, on the whole, provided equally with obligations, and their co-operation assures the well-being of the individual family.

Even at first glance it seems natural for the man to take over the exertions of the hunt requiring strength and for the woman to busy herself with the easier collecting of smaller things (229).

229. Hyades (h):23 has clearly pointed out this division of labor: "Everything connected with the hunt and even the cutting up of the dead animal is the exclusive occupation of the man, just as we have seen that fishing is

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/527 cont./
thongs, sometimes the man slips, lets go his hold, and falls into the surging sea below" /cited in English/.

presses them, they decide to do it (250) and admonish each other

250. Similar descriptions of this type of cormorant hunting are given by Bridges (in VSA:XIII, 214; 1866 and in MM:XIII, 156; 1879), Dabbene (b):186, Hyades (h):39 and (q):359, Outes (g):53, and others.

to be particularly cautious.

In this connection the hunter must count on another difficulty which sometimes puts him in the greatest danger. His wife must row him to those high rock walls or low flat stones on which he plans to hunt the cormorant. He lands during the day and keeps hidden until evening when the birds are expected to come back to their nests. Meanwhile the wife in the canoe has gone back to a safe inlet on another island, but has left her husband some meat and drinking water. Woe unto him if bad weather suddenly sets in, and he is detained longer than expected at this place. "Many days may pass before his wife can venture to cross over the islet to take him off. The solitary man then husbands to the utmost his limited supply of fresh water. The rising billows nearly overflow the islet, sometimes quite so, and threaten to wash him away, and the spray keeps him thoroughly wet. I have heard of very distressing cases, when the men have had to drink shag's blood and to eat them raw, and when they have nearly perished with the cold" /cited in English/. This description by Bridges (MM:XIII, 158;1879), drawn from reality, makes us realize the many dangers and sacrifices that the Yamana encounter on their hunt for cormorants. His accurate knowledge of the region and his sure estimate of the weather, however, stand him in good stead, hence he never recklessly plunges into danger (see Hyades [q]:360).

[26] 27]

These birds even spend the night on the stronger trees that grow near the water's edge and are easy to reach. Such trees

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262 the year round abundant /cited in English/ (MM:III,116;1869). He is saying a little too much in the first part of this statement.

not in a position to give all of these their exact botanical names. It is very remarkable that he eats only those that grow on trees, never those growing on the ground. Each species matures in one particular month, which is why the Indian could at any time give himself a little variety in his monotonous meat diet by using fungi. "Fungi of many kinds are also all the year round much used as food, different kinds coming in at different seasons" /cited in English/ (Bridges [a]:213).

227 262 [25] It is left to each individual to hunt occasionally for a few fungi whenever he feels like it. The only ones actually gathered are the very common Cyttaria darwinii which are strung up on small sticks in the hut and kept for a time in a dried state. Bridges (MM:VII,121;1873) is obviously exaggerating when he attaches special significance to fungi in the daily household of the Yamana. [26] When there is a famine, however, the people use fungi to help out as long as they can find them. Aspinall:270 expresses himself more accurately when he speaks of the individual foods in order of their importance: "For their subsistence [these Indians] are dependent solely on the hunt; /556/ in an emergency they content themselves with a diet of mussels. Digestive difficulties that may result from this are healed with a diet of fungi." Fungi are neither more nor less than a rare, occasional addition to the main diet.

222 2. Berries. It is obvious that the Yamana can enjoy berries, amáim, for only a few weeks. The most common are amáiiugurž, the fruit of Pernettya mucronata which sometimes covers extensive areas in the form of a low shrub (Fig. 12 /untranslated; see foreign text, p. 121/). In spite of the hard points on the leaves, women and girls move through the bushes and pick the ripe crimson berries, gather them in their little baskets, and take them to their hut. Less common in that region is the /Fig. 67 appears here/ smaller Pernettya pumila (Fig. 67), the fruit of which is called ɣanamáim, and the somewhat taller Empetrum rubrum, ašána, the fruit of which is known as šépisamáim. These two bushes have only small fruits which attract the Indians less.

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177 /568/ It is not only the excitable animosity of Fuegian dogs that exceedingly provokes every European, but even more their mania for destruction and their voraciousness. They enter all buildings craftily and unobserved, plunder storage houses, and rummage through every corner. They enjoy attacking herds of sheep and goats. In order finally to get rid of these burdensome creatures, the White settlers poisoned and shot some and took others alive from the Indians in exchange for European breeds. Since all these bred unselectively among each other, the strangest mixtures resulted. With the decrease in the Indian population, however, they, too, are constantly decreasing and will disappear entirely along with the last Yamana.

F. Treatment of Foodstuffs

261 The little corner of earth that was destined as the home of the Yamana is poor in natural products. This in itself is responsible for many limitations in their means of livelihood. The natives have no choice but to be content with the little that harsh and parsimonious nature has provided for them. Unassuming as they are, they yield to the external pressure that has disciplined them to an amazing state of contentment and humility. Their attitude, however, is far from being one of dull insensibility. Our Indians have by no means lost all freedom of choice and will never, like a badly trained animal, fill their hungry stomachs indiscriminately with anything and everything that is at hand.

The Yamana is more favorably situated than the Selk'nam, because the sea offers more lavish gifts than the interior. Hence he differentiates more than the Selk'nam and shows himself more particular in his choice. He has his own guides and principles that lead him in his selection of food. They are primarily determined by taste, but not entirely, for the Fuegians consistently refuse [272 177] milk, for example, which they could easily obtain from White settlers, and they have adopted other items of European food only after a long period of resistance. In times of distressing hunger they also take things out of necessity which they would decidedly scorn in ordinary life.

/574 cont./

271 465 881 any. The candidates in the čiexaus, however, must use the tube each time, and toward the end of their probation they are instructed to go on using it. The little tube probably did not originate solely as a precaution against the cold water. It is also used in the hut when someone has brought in water in the large Voluta shell or in a leather pouch. This pouch is exactly like the one used by the Selk'nam (Vol. I, Figs. 71 and 72) and here as well as there is made out of the stiff leather of an old male seal. Other water dippers or containers that hold the contents as safely as does the Voluta shell are not used by the Yamana.

261 731 The Yamana, especially those in the border regions, are never at any time of the year safe from the threatening specter of hunger. It would be entirely incorrect to interpret the references of a few travelers to mean that misery overtakes the entire tribe more or less constantly (341). Famine actually cannot

341. The assertion of Outes (g):56 that "during the winter when the coasts become inaccessible, many victims of hunger perish" /translated from Spanish/ is inaccurate.

appear there as a general phenomenon; lack of food overtakes individual families only temporarily, that is, for a few days. The most common cause is such stormy weather with an angry sea for several days that a family cannot leave the place where they are in order to look for food elsewhere. When their few provisions are used up -- and that happens very quickly, since there is never a thought of stocking up -- trouble begins if all the sources on the spot are exhausted and calamitous natural forces put a stop to further travel. This fate will overtake a family, for example, who has fled to an island or been detained on a small island where birds do not alight and where the coast falls off abruptly. In most places on the Cape Horn Archipelago they find at least medium-sized and small mussels which are temporarily laid bare by low tide, even in bad weather. In some places they can make shift with fungi. "When bad weather lasts a long time, fishing becomes impossible and resources, always very small, are quickly exhausted; then they eat fungi which are found abundantly on beech trees" /translated from French/ (Martial:193).

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261 This shows that individual families may be in danger of having to suffer hunger at any time during the year, but only in certain places (342). A family may suffer dire distress for

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342. Despard (b):680 says very definitely: "Occasionally, through stress of weather in winter, they suffer hunger, but from their fat lookes /sic/, one would judge these painful occasions are rare" /cited in English/.

another, but far less frequent reason, when they lose their canoe and do not make immediate contact with their own people. There are places where the available food /575/ animals are quickly exhausted, and whoever cannot leave such a place in time must be prepared to suffer hunger. Formerly, when this Indian tribe was more numerous, canoes were everywhere actively moving about; an abandoned family immediately summoned help by means of the customary smoke signals and was soon relieved. Finally, in most recent times, the food supplies of a family could become scarce when the family was struck by an epidemic. Children especially were in a serious situation when their parents or adult relatives were prevented from hunting for food because of illness. Neighbors, of course, were glad to help out, but even so, the days of bitter want sometimes continued for a while. It was probably very seldom, if at all, that a Yamana died of hunger alone.

261 Hyades (g):34 has described how the Indians behave in such difficulties. In times of food scarcity "if chance does not let them find a dead seal or a stranded whale on the shore, it means, of course, fasting. Then they lie motionless in their huts around the smoldering fire and get up only if fresh firewood is needed. If their hunger grows too intense, they gather the roots of Armeria magellanica (343) on the beach, and although these contain

343. Sometimes also dandelion leaves (Taraxacum). They want this, above all, to suppress the feeling of hunger. Compare Outes (g):53 and Hyades (f):564.

/575 cont./

261 almost no food value, they stuff their rumbling stomachs with them. Fortunately, snow storms (344) such that make any outside

> 344. A much greater impediment than snowstorms is the agitated sea when meter-high waves roll up from the south and churn up the water even in remote channels.

activity impossible seldom last more than three or four days, and that, after all, can be endured. In such periods of fasting the people quickly become emaciated, but as soon as they have enough food they recover almost as quickly, and then they can eat quite surprising quantities of meat." Sometimes the emergency can reach such a point that the people begin to chew pieces of leather. Darwin (d):245 ventured the false assertion [266] that "if in winter they are plagued with hunger, they would sooner kill and eat their old women than slaughter their dogs." The reliable Bridges (h):206 (345) and later Hyades (q):339

> 345. He specified: "There have been occasions of extreme hunger, when bad weather kept them from obtaining provisions from the forest, shore, or sea, during which they ate their leather shoes and thongs, but no one thought of proposing the eating of human flesh" /translated from Spanish/.

both very definitely disagreed with this. The Indians, however, [674] do steal from any European settled there if they are unable to obtain the most necessary food in any other way (346). When the

> 346. Bridges (e):333, for example, concedes this: "The natives killed some cattle and goats, and they steal crops from the fields; still, one is surprised at the limited extent of their thefts, if one considers the half-starved state in which they live."

261 /575 cont./
days of need are over, they recover /576/ surprisingly fast; serious after-effects or a weakening of their health scarcely ever appear. Habit has taught them how best to overcome the brief periods of hunger without harm.

262 439 Ever since the Yamana have had easy access to the various farms, they have bartered there for all kinds of European food and luxuries, such as sugar and wine, coffee and tea, onions, canned tomatoes, and other things. They also acquired cooking pots, in which they prepare our foods so that they are reasonably tasty. This strange diet, however, is not good for their health. [144] Besides toothache, other physical ailments appear, which the people in olden times were fortunately spared despite all kinds of deprivations.

2. How They Divide the Booty

225 We must insert here a few data about the way in which larger pieces of game are used. On the one hand we shall mention obligations of a social nature, for which we shall later give more detailed reasons. On the other hand, the receipt of a gift cannot be compared with ordinary food-getting. Since, however, in the case of the most important animals hunted, namely, seals and whales, there is a definite obligation to let others share it, we shall most conveniently describe here the prevailing custom.

Every local group greets with indescribable rejoicing a whale that has been driven inland or deposited on the beach. Dense swarms of sea birds announce this extraordinary gift of nature. According to the general conception, any man who has first seen or touched the whale is the owner of it, not, however, in the sense that he alone may eat of this animal, the enormous masses of which he would, in any case, be incapable of coping with, but only insofar as it is up to him to arrange an orderly distribution (347).

347. From an earlier period when whales were still plentiful Bridges (a):208 reported: "Certain persons, those who first found the whale, have the right to distribute it" /cited in English/.

/593 cont./

264 pokes into them with a little stick, constantly shifting the glowing embers or piling the hot ashes higher. He gets particular pleasure out of entertaining himself in this way, until he can give himself up completely to enjoying them. When the pieces are done and have proved to be very delicious, he clicks his tongue with delight and lets everybody around him know in what gluttonous ecstasy he is feasting. During the trip in the canoe every occupant must cautiously move up to the small fire, and one moves away when another person wants to roast something for himself. The woman, whose duty it is to do the rowing, must regularly go without food for hours, but she makes up for it later on the beach. If circumstances make it imperative -- usu-
• 261 ally it is bad weather -- everyone can get along all right without
147 food for considerable time. On the other hand, if one finds himself with a great abundance, he can consume almost incalculable amounts. A person can gain weight quickly, but he can just as quickly grow thin again; one can best trace these changes in children over a period of a few days. Their health apparently does not suffer, however (380).

380. Lothrop (c):303 has expressed some conjectures about the relation between diet and physical size in Tierra del Fuego, but he cites only inadequate observations which are not sustained by actual facts.

264 In conclusion, it becomes clear from certain customs that
151 the Fuegian is guided by definite rules in eating. For example, he does not bother with very dirty meat, but throws it away without further ado. Something that has been nibbled at by a dog he angrily lets him have. /594/ He removes decaying pieces of meat as far as possible from his hut, whereas he does not seem to have any feeling about melting fat or moldy skins. His sense of smell is unquestionably very much dulled, and he never holds a doubtful piece up to his nose. Anything that has become putrid has to give off a vile odor before he will remove it. He is certainly not clean in eating and in his ways. Nevertheless, one person will prove to be more of a greedy gourmet, the other less. He knows the tastier pieces and the juicier morsels and chooses

/594 cont./

264 these if possible. The tender meat of young animals tickles his
157 palate, and the height of ecstacy for him is the nicely browned fat of a whale that has been stranded for some time. There are many things that conclusively prove that a Fuegian's taste is by no means insensible or dulled, no matter how uniform the taste of everything that he eats on account of so much blubber.

5. How They Store Food

251 The unsettled way of life and their uninterrupted changes of
261 dwelling do not permit the Yamana to lay in large supplies. The general statement of Hyades (d):306 "They do not make any provision for the future" /translated from French/, applies without qualification, since they do not strive to provide for the immediate or the distant future. A decisive factor may be that food does not keep in that arbitrarily inclement weather, and in order to preserve it, one would have to go through all kinds of complicated preparations. All this is superfluous, because throughout the entire year and with almost limitless generosity the sea puts all kinds of animals at the disposal of the man who hunts and the woman who gathers. Storm or accident will deprive a family of these things for no more than a few days. Generally no one need reckon with the danger of hunger, and everyone almost anywhere finds an abundance of what he needs (381).

381. Bridges' (h):205 brief statement says a great deal: "In general, food is abundant" /translated from Spanish/.

Why, then, should anyone worry about food for the future (382)!

382. Hyades (g):34 writes: "The most wonderful thing about the Fuegians is that they never think of providing for the next day. And yet winter is severe enough and there are by no means few periods when the Fuegian can neither hunt nor fish nor even pick up mussels on the rocks

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pounded by the surf." He is obviously exaggerating the dangers of hunger and distress to which these natives on Cape Horn are exposed.

Nevertheless, the surplus that is left over for the people by a stranded whale is regularly stored, simply because they do not like to let the huge masses of fat and meat spoil and because they would like to give themselves the great treat of roasted whale fat another time. It would be utterly erroneous to see in this endeavor any specific provision, /595/ for, if the stranded animal is young and the number of people that have hastened to it is unusually large, all the fat and all the meat are consumed within a few days, the only exception being that some family or another will carry a few pieces around with them somewhat longer. Thus, they save only what the individual families cannot and do not wish to consume in the vicinity of the whale. The consumption of the fat and meat of this animal exclusively is wholesome for the human body only for a certain length of time.

251 Most of the people transport the entire canoe-load to their home area. Here they put the large pieces in a swamp with good drainage and secure them well between the tangles of peat and roots at a certain depth. The dark-brown water excludes light and air. To prevent them from being washed up, they are weighted down with flat stones or logs, which also protects them from foxes and dogs. Undoubtedly the abundance of soluble salt acts as a preservative, and the tannic acid probably also helps. The pieces put down are never so thick that they cannot be completely soaked and pickled. It is clear that this produces an improvement in the flavor. The natives justifiably praise the advantages of conserved fat, even if it has lain in the swamp for several months (383). Occasionally, if chance permits, the

383. Fred Lawrence found a piece that had lain in the swamp for a year and a half still tasty. Our Indians know that their preserves are safe in it for a long time. "They hoard up the blubber for months by burying it in mud

/395 cont./

251 thus cured, and eaten some months after it has been out of season" /cited in English/. Compare Hyades (q):340.

conveniently in small baskets and leather bags, they are stripped off the little sticks and /396/ left as they are or made into a wreath on a few flexible rush stalks (Marsippospermum). Since they have been baked until they are quite hard, they resist the dampness of the air for a long time. Before they are eaten, they are soaked in liquid blubber (p. 324). For the final weeks of winter the woman keeps about 50 or 60 of these dried fungi, but only as a delicacy, not out of foresight, since fresh ones can be picked almost all the year round and no one wants to burden himself with them for long.

261 Basically our Fuegians know that they need not fear for the future, hence they do not pile up supplies. Year in and year out they can look forward to the next day, free of care. Despite all the monotony of their food, they always have an abundant amount at their disposal. At the same time, many a change and stimulus for the palate are afforded, for everyone has unimpeded access to anything and everything that Mother Nature is in a position to offer from her animal and vegetable kingdom (388).

388. It is only in this sense that we can interpret what Hyades (p):328 says, namely, that "there are never preferred foods" /translated from French/.

In order to characterize briefly the value of their diet according to vitamin content, I should like to remind the reader that the A-vitamins, the so-called anti-xerophthalmic vitamins, occur abundantly in liver oil. Blubber, as is well known, has by far the greatest amount of vitamin A, namely, 300 times as much as butter fat, besides a great deal of the anti-rachitic D-vitamins. Several animal tissues furnish the anti-scorbutic C-vitamins, as well as the anti-neuritic B-vitamins.